Listing of Claims

1. (currently amended) In a computer system, a computer-implemented method comprising:

receiving video data;

encoding the video data;

parameterizing control information other than the encoded video data, including:

setting a filter type selection that identifies one or more of plural different types of filters for post-processing filtering, wherein the control information includes the filter type selection; and

setting filter information that varies depending on quality or bitrate of the encoded video data, wherein the control information further includes the filter information, and wherein the filter information is different than the filter type selection;

wherein the control information facilitates adjustment by a decoder~~, depending at least in part on processing cycles available to the decoder,~~ of ~~which filter operations are to be performed in~~ the post-processing filtering of the video data after decoding of the encoded video data, the adjustment including:

using the filter type selection to identify the one or more types of filters; and

using the filter information to determine filter operations that are appropriate for the quality or bitrate of the encoded video data, wherein the filter operations are for the identified one or more types of filters, and wherein, within settings defined by the control information for the post-processing filtering, the decoder can adjust the filter operations depending on processing cycles available to the decoder; and

outputting the encoded video data as well as the control information.

2. (previously presented) The method of claim 1 further comprising:

receiving input that indicates the control information.

3. (previously presented) The method of claim 2 wherein a video encoder receives the input.

4. (previously presented) The method of claim 2 wherein an application receives the input and provides the control information to a video encoder.

5. (original) The method of claim 1 wherein a video encoder specifies the control information depending on one or more criteria, and wherein the one or more criteria include quantization step size and/or quality of the video data.

6. (previously presented) The method of claim 1 wherein the post-processing filtering to be performed includes applying a de-blocking filter.

7. (previously presented) The method of claim 1 wherein the post-processing filtering to be performed includes applying a de-ringing filter.

8. (currently amended) The method of claim 1 wherein the ~~control~~ filter information ~~comprises~~ is parameterized as a level for the post-processing filtering.

9. (currently amended) The method of claim 1 wherein the ~~control~~ filter information ~~comprises~~ is parameterized as a maximum allowed level for the post-processing filtering.

10. (currently amended) The method of claim 1 wherein the ~~control~~ filter information ~~comprises~~ is parameterized as a minimum allowed level for the post-processing filtering.

11. (canceled)

12. (original) The method of claim 1 further comprising entropy encoding the control information.

13. - 16. (canceled)

17. (currently amended) In a computing device that implements a video encoder, a method comprising:

at the computing device that implements the video encoder, receiving video data;

with the computing device that implements the video encoder, encoding the video data;

with the computing device that implements the video encoder, parameterizing control information other than the encoded video data, including:

setting a filter type selection that identifies one or more of plural different types of filters for post-processing filtering, wherein the control information includes the filter type selection; and

setting filter information that varies depending on quality or bitrate of the encoded video data, wherein the control information further includes the filter information, and wherein the filter information is different than the filter type selection;

wherein the control information facilitates adjustment by a decoder~~, depending at least in part on processing power available to the decoder,~~ of ~~which filter parameters are to be applied in~~ the post-processing filtering of the video data after decoding, the adjustment including using the filter information to determine filter operations that are appropriate for the quality or bitrate of the encoded video data, wherein the filter operations are for the one or more types of filters identified with the filter type selection, and wherein, within settings defined by the control information for the post-processing filtering, the decoder can adjust the filter operations depending on processing power available to the decoder; and

with the computing device that implements the video encoder, outputting the encoded video data as well as the control information.

18. (currently amended) A computer-implemented method comprising:

receiving encoded video data in a bitstream as well as control information in the bitstream for controlling post-processing filtering, the control information comprising data in the bitstream other than the encoded video data, wherein the control information includes:

a filter type selection that identifies one or more of plural different types of filters for the post-processing filtering; and

filter information that varies depending on quality or bitrate of the encoded video data, wherein the filter information is different than the filter type selection;

decoding the encoded video data;

determining available processing cycles; and adjusting~~, depending at least in part upon the available processing cycles and the control information, which filter operations to perform in~~ the post-processing filtering on the decoded video data, the adjustment including using the filter information to determine filter operations that are appropriate for the quality or bitrate of the encoded video data, wherein the filter operations are for the one or more types of filters identified with the filter type selection, and wherein, within settings defined by the control information for the post-processing filtering, the decoder can adjust the filter operations depending on the processing cycles available to the decoder.

19. (original) The method of claim 18 wherein the post-processing filtering includes applying a de-blocking filter.

20. (original) The method of claim 18 wherein the post-processing filtering includes applying a de-ringing filter.

21. (currently amended) The method of claim 18 wherein the ~~control~~ filter information ~~comprises~~ is parameterized as a level for the post-processing filtering.

22. (currently amended) The method of claim 18 wherein the ~~control~~ filter information ~~comprises~~ is parameterized as a maximum allowed level for the post-processing filtering.

23. (currently amended) The method of claim 18 wherein the ~~control~~ filter information ~~comprises~~ is parameterized as a minimum allowed level for the post-processing filtering.

24. (canceled)

25. (original) The method of claim 18 further comprising entropy decoding the control information.

26. - 29. (canceled)

30. (currently amended) A computer-readable medium storing computer-executable instructions for causing a computer system to perform a computer-implemented method comprising:

receiving encoded video data in a bitstream as well as control information in the bitstream for controlling post-processing filtering, the control information comprising data in the bitstream other than the encoded video data, wherein the control information includes:

a filter type selection that identifies one or more of plural different types of filters for the post-processing filtering; and

filter information that varies depending on quality or bitrate of the encoded video data, wherein the filter information is different than the filter type selection;

decoding the encoded video data;

using the filter type selection to select one or more of plural different types of filters for post-processing filtering;

determining available processing power; and

adjusting~~, depending at least in part upon the available processing power and the control information, which filter parameters to apply in~~ the post-processing filtering on the decoded video data, including using the filter information to determine filter operations that are appropriate for the quality or bitrate of the encoded video data, wherein the filter operations are for the selected one or more types of filters, and wherein, within settings defined by the control information for the post-processing filtering, the decoder can adjust the filter operations depending on the processing power available to the decoder.

31. - 38. (canceled)

39. (previously presented) The method of claim 1 wherein the adjustment of post-processing filtering to be performed comprises skipping the post-processing filtering for at least some of the video data.

40. (previously presented) The method of claim 1 wherein the control information specifies that the decoder should skip the post-processing filtering.

41. - 44. (canceled)

45. (currently amended) The method of claim 1 wherein the control information further comprises:

information indicating whether or not the post-processing filtering is to be performed after decoding; and

for each of plural pictures represented in the video data, if the post-processing filtering is to be performed for the picture, information indicating [[a]] the filter type selection for the post-processing filtering for the picture~~, the filter type selection indicating one or more of plural different types of filters in the decoder~~.

46. (canceled)

47. (previously presented) The method of claim 18, wherein determining available processing cycles comprises determining available CPU cycles for applying post-processing filtering.

48. (previously presented) The method of claim 18, further comprising performing the post-processing filtering.

49. (canceled)

50. (currently amended) The method of claim 18, wherein the control information further comprises:

information indicating whether or not the post-processing filtering is to be performed after decoding; and

for each of plural pictures represented in the video data, if the post-processing filtering is to be performed for the picture, information indicating [[a]] the filter type selection for the post-processing filtering for the picture~~, the filter type selection indicating one or more of plural different types of filters for the post-processing filtering~~;

the method further comprising parsing the control information.

51. (previously presented) The method of claim 50, wherein the parsing the control information comprises parsing identifying information indicating whether or not post-processing filtering is to be performed.

52. (previously presented) The method of claim 51, wherein the parsing the control information further comprises, for each of the plural pictures represented in the video data, if the post-processing filtering is to be performed for the picture, parsing information indicating the filter type selection for the post-processing filtering for the picture.

53. (previously presented) The method of claim 17 wherein a video encoder specifies the control information depending on one or more criteria, and wherein the one or more criteria include quantization step size and/or quality of the video data.

54. (previously presented) The method of claim 17 wherein the post-processing filtering to be performed includes applying a de-blocking filter or a de-ringing filter.

55. (currently amended) The method of claim 17 wherein the ~~control~~ filter information ~~comprises~~ is parameterized as a level for the post-processing filtering.

56. (currently amended) The method of claim 17 wherein the ~~control~~ filter information ~~comprises~~ is parameterized as a maximum allowed level or a minimum allowed level for the post-processing filtering.

57. (currently amended) The method of claim 17 wherein the control information further comprises:

information indicating whether or not the post-processing filtering is to be performed after decoding; and

for each of plural pictures represented in the video data, if the post-processing filtering is to be performed for the picture, information indicating [[a]] the filter type selection for the post-processing filtering for the picture~~, the filter type selection indicating one or more of plural different types of filters in the decoder~~.

58. (canceled)

59. (previously presented) The computer-readable media of claim 30 wherein the post-processing filtering includes applying a de-blocking filter or a de-ringing filter.

60. (currently amended) The computer-readable media of claim 30 wherein the ~~control~~ filter information ~~comprises~~ is parameterized as a level for the post-processing filtering.

61. (currently amended) The computer-readable media of claim 30 wherein the ~~control~~ filter information ~~comprises~~ is parameterized as a maximum allowed level or a minimum allowed level for the post-processing filtering.

62. (previously presented) The computer-readable media of claim 30 wherein determining available processing power comprises determining available CPU cycles for applying post-processing filtering.

63. - 64. (canceled)

65. (new) The method of claim 1 wherein, when the filter information indicates lower quality or bitrate, the filter information tends to enable the post-processing filtering, and wherein, when the filter information indicates higher quality or bitrate, the filter information tends to disable the post-processing filtering.

66. (new) The method of claim 17 wherein, when the filter information indicates lower quality or bitrate, the filter information tends to enable the post-processing filtering, and wherein, when the filter information indicates higher quality or bitrate, the filter information tends to disable the post-processing filtering.

67. (new) The method of claim 18 wherein, when the filter information indicates lower quality or bitrate, the filter information tends to enable the post-processing filtering, and wherein, when the filter information indicates higher quality or bitrate, the filter information tends to disable the post-processing filtering.

68. (new) The computer-readable media of claim 30 wherein, when the filter information indicates lower quality or bitrate, the filter information tends to enable the post-processing filtering, and wherein, when the filter information indicates higher quality or bitrate, the filter information tends to disable the post-processing filtering.